

Application No.: 10/737,412

Docket No.: JCLA10726

REMARKSPresent Status of Application

The Office Action dated December 25, 2005, rejected claims 1-8 and 17-24 under 35 USC§102(b) as being anticipated by Bindra et al. (US Patent No. 5,129,142).

Claim 17 has been amended for providing more descriptions for clarification purposes, while claims 1-8 and 19 have been cancelled. No new matter has been added to the application by the amendments made to the specification, claims and drawings. This Amendment is promptly filed to place the above-captioned case in condition for allowance. After entering the amendments and considering the following discussions, a notice of allowance is respectfully solicited.

Discussion for 35 USC§102 rejections

Claims 1-8 and 1-247 were rejected under 35 USC§102(b) as being anticipated by Bindra et al. (US Patent No. 5,129,142).

Claims 1-8 have been cancelled.

Claim 17 has been amended for clarification purposes by incorporating limitations of claim 19 and further descriptions from the specification. Supporting grounds can be found at least in Figures 2C and related descriptions in paragraph [0024].

Applicants submit that independent claim 17 patently defines over the prior references for at least the reason that the cited art fails to disclose each and every feature as claimed in the present invention.

As amended, the independent claim 17 recites:

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17. A multi-layered substrate, at least comprising:

a lamination structure having at least a through-hole, wherein the through-hole passes through and links up with the surfaces of the lamination structure;

a first mask layer formed on one surface of the lamination structure, wherein the first mask layer has at least a first opening;

a second mask layer formed on another surface of the lamination structure, wherein the second mask layer has at least a second opening; and

a vertical routing structure comprising a conductive rod and a conductive layer, wherein the conductive rod occupies the interior of the through-hole and the ends of the conductive rod completely fill the first opening and the second opening respectively, and the conductive layer occupies the space between the interior surface of the through-hole and the conductive rod, wherein the conductive layer extends to cover a peripheral surface of the second opening and a portion of the second mask layer around the second opening.

The Office Action considered that the reference Bindra substantially discloses all the features of this invention as recited in claims 17-24. The Office Action considered Bindra's layers 1, joining metal 2, vias 8 and metal layer 9 (referring from Bindra's col. 4, lines 34-40) comparable to the mask layers, the conductive rod, through-holes and the conductive layer of this invention.

Applicants respectfully traverse this interpretation.

Bindra discloses a process for making a high density circuit board. According to Figures 2A-3C, a circutized power core (CPC) with dielectric layers 1 having lands 7 and vias 8 being opened up is provided, and a continuous metal layer 9 is formed. The metal layer 9 is processed

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(i.e. patterned) by applying photoresist to isolate cavities which were formed at the desired land-via sites (col. 4, lines 42-45). As shown in Figures 3B-3C, the patterned metal layer 9 only covers the inner surface of the vias 8, but not the surface of the lands 7 (cavities).

In this case, even considering metal 2 is comparable to the conductive rod of this invention, Bindra does not teach the conductive layer of this invention because Bindra's layer 9 is different from "the conductive layer extends to cover a peripheral surface of the second opening and a portion of the second mask layer around the second opening" as recited in claim 17.

Accordingly, the structure of the present invention is patentably distinct from the prior art reference Bindra because Bindra fails to disclose all limitations of amended claim 17. For at least the foregoing reasons, dependent claims 18 and 20-24 patently define over the cited reference and should be allowed.

Consequently, reconsideration and withdrawal of these 102 rejections are respectfully requested.

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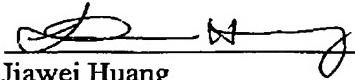
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CONCLUSION

In view of the foregoing, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,
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